

What Is Claimed Is:

1. A paintgun with pneumatic feeding and discharging process comprising:

a) a trigger assembly used to actuate the firing element of paintballs;

5 b) a barrel assembly fitted above the trigger assembly, a bore being provided at the front end thereof, a paintball-feeding tube being disposed above the bore; and

c) a pneumatic delivery mechanism installed within the barrel assembly, including;

10 i) a flow-guiding body positioned within the upper barrel, the front part of the flow-guiding body being constructed as a tube having a through hole inclinedly extended at the top wall, the flow-guiding body having an axially extending hole with a smaller diameter at the front part and a larger diameter at the rear part while a tail stopper is plugged into the rear part of the flow-guiding body,

15 thereby forming a major air channel at the front part and a flow-guiding chamber at the rear part thereof, the flow-guiding chamber having an input port which is in connection with upper and lower inlets of the upper and lower barrels, the tail stopper having an outlet port extending from axial direction to radial direction at the

20 inner end thereof, the outlet port communicating with an outlet channel in the larger part of the flow-guiding body while the outlet channel is further connected to an upper and a lower outlet of the upper and the lower barrels, a stopper being provided to control the opening and closing of the air flow channel, a connection

channel being disposed beside the lower outlet and connected to a minor air channel at the outer side of the bottom of the tube, the movement of the stopper being controlled by the trigger assembly;

- 5 ii) a flow-guiding movable body disposed within the flow-guiding chamber with a slimmer front part and a wider rear part, an air piston at the front end of the flow-guiding piston being forced against the major air channel while a separating body at the rear end of the flow-guiding piston is inserted into the internal wall of the flow-guiding chamber such that the flow-guiding chamber is
10 divided by the separating body into a front and a rear air pressure chamber with different pressure area, a small through hole being interposed between the front and the rear air pressure chambers; and
- 15 iii) a delivery tube placed around the tube at the front end of the flow-guiding body, a return spring being disposed around the front part of the delivery tube;

whereby the stopper is used to control the opening or closing of air flow channel, thereby leading to a pressure difference between the front and rear air pressure chambers of the flow-guiding piston, and the delivery tube is
20 shifted forward by means that a small amount of air flow is fed into the minor air channel so as to push a paintball a little forward; thereafter, the paintball is discharged by means of thrust of air flow into the major air channel.

2. The paintgun with pneumatic feeding and discharging process as
25 recited in claim 1 wherein the barrel assembly is composed of an upper and

- a lower barrel and both of which are assembled by fastening elements.
3. The paintgun with pneumatic feeding and discharging process as recited in claim 2 wherein the upper and lower barrels have an upper and a lower inlet and an upper and a lower outlet, respectively.
- 5 4. The paintgun with pneumatic feeding and discharging process as recited in claim 1 wherein the barrel assembly is formed in a piece.
5. The paintgun with pneumatic feeding and discharging process as recited in claim 1 wherein the delivery tube has a flange at the rear end thereof against which one end of the return spring is fixed, and wherein the
10 barrel assembly is provided with a corresponding flange against which the other end of the return spring is pressed, and wherein an O-ring is disposed around the outer circumference of the rear end of the delivery tube.
6. The paintgun with pneumatic feeding and discharging process as recited in claim 1 wherein the separating body is a piston.
- 15 7. The paintgun with pneumatic feeding and discharging process as recited in claim 1 wherein the separating body is a membrane.
8. The paintgun with pneumatic feeding and discharging process as recited in claim 1 wherein the trigger assembly includes a trigger, firing circuit, batteries and control elements.
- 20 9. The paintgun with pneumatic feeding and discharging process as recited in claim 8 wherein the control element includes a stopper.
10. The paintgun with pneumatic feeding and discharging process as recited in claim 8 wherein the control element includes a stopper.
11. The paintgun with pneumatic feeding and discharging process as
25 recited in claim 8 wherein the air pressure source is supplied by an air

pressure tank.